

Substitute for Form 1449 A &amp; B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

1

of

1

**Complete if Known**

Application Number	10/662,397
Confirmation Number	Unknown
Filing Date	September 16, 2003
First Named Inventor	USUI, Minoru
Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	Q77369

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			
		US			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
AS		JP	60-4820	A	1/11/1985		Yes

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>

Examiner Signature

*Andrew R. Jackson*

Date Considered

05/14/04

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			Complete if Known		
			Application Number	Unknown	
			Confirmation Number	Unknown	
			Filing Date	September 16, 2003	
			First Named Inventor	USUI, Minoru	
			Art Unit	Unknown	
			Examiner Name	Unknown	
Sheet	1	of	5	Attorney Docket Number	Q77369

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
ds		US 2002/0015068	A1	2-7-2002	Tsukada et al.
ds		US 2002/0135623	A1	9-26-2002	Tsukada et al.
ds		US 5,689,288		11-18-1997	Wimmer et al.
ds		US 5,774,136		6-30-1998	Barbehenn et al.
ds		4,811,595		3-1989	Marciniak et al.
ds		5,975,102		11-2-1999	Schalk et al.
ds		6,044,694		4-4-200	Anderson et al.
ds		3,110,890		11-12-1963	V.C. Werstcott et al.
ds		4,329,875		5-18-1982	Nolting et al.
ds		4,594,891		6-17-1986	Benz et al.
ds		4,703,652		11-3-1987	Itoh et al.
ds		6,089,686	A	7-18-2000	Thornton et al.
ds		6,089,688	A	7-18-2000	Thornton et al.
ds		4,479,982		10-30-1984	Nilsson et al.
ds		5,616,929		4-1-1997	Hara
ds		US 4,770,038		9-13-1988	Zuckerwar et al.
ds		US 5,586,085		12-17-1996	Lichte
ds		US 6,312,074		11-2001	Ray A. Walker
ds		US 6,164,744		12-2000	Froger et al.
ds		US 5,353,631		10-1994	Woringer et al.

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
ds		EP	684,136	A2	11-29-1995		
		FR	2,572,519	A1	5-2-1986		
		WO	98/09139	A1	3-5-1998		
		JP	58-205820	A	11-30-1983		

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		Patent Abstracts of Japan for publication No. 02-034353, Vol-014, 186 (M-0962), February 5, 1990, Cannon Inc.	
		Patent Abstracts of Japan for publication No. 07-081290, Vol. 1995, No. 06 March 28, 19956 Pentel KK	

Examiner Signature: <i>Andrew K. Jackson</i>	Date Considered: <i>05/14/04</i>
--	----------------------------------






*Strike throughs are not filed  
with the application*

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	Unknown
				Confirmation Number	Unknown
				Filing Date	September 16, 2003
				First Named Inventor	Minoru USUI
				Art Unit	Unknown
Examiner Name	Unknown				
Sheet	2	of	5	Attorney Docket Number	Q77369

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
<i>[initials]</i>		US 6,470,744	B1	10-29-2002	USUI, et al.
<i>[initials]</i>		US 2002/0012015	A1	01-31-2002	TSUKADA, et al.
<i>[initials]</i>		US 2002/0015084	A1	02-07-2002	TSUKADA, et al.
<i>[initials]</i>		US 2002/0170353	A1	11-21-2002	USUI, et al.
<i>[initials]</i>		US 6,536,861	B1	3-25-2003	USUI et al.
<i>[initials]</i>		US 2003/0117450	A1	6-26-2003	USUI et al.
<i>[initials]</i>		US 2003/0117451	A1	6-26-2003	USUI et al.
<i>[initials]</i>		US 2003/0043216	A1	3-6-2003	USUI et al.
<i>[initials]</i>		US 2003/0140694	A1	7-31-2003	USUI et al.

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		JP	10-305590	-	11-17-1998		
		EP	1,088,668	A1	4-4-2001		
		EP	853,236	A1	7-15-1998		
		JP	10-26549	A	1-27-1998		
		JP	7-137276	A	5-30-1995		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
<i>[initials]</i>		English language abstract No. Hei 10-305590 November 17, 1998	
		Patent Abstracts of Japan, Vol. 1998, No. 5, April 30, 1998	
		Patent Abstracts of Japan, Vol. 1995, No. 8, September 29, 1995	
		Patent Abstracts of Japan, Vol. 2000, NO. 14, March 5, 2001	

Examiner Signature	<i>Dodder K. Jackson</i>	Date Considered	05/14/04
--------------------	--------------------------	-----------------	----------

*Strike throughs not filed with application*

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	Unknown
				Confirmation Number	Unknown
				Filing Date	September 16, 2003
				First Named Inventor	Minoru USUI, et al.
				Art Unit	Unknown
				Examiner Name	Unknown
Sheet	3	of	5	Attorney Docket Number	Q77369

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
<i>[initials]</i>		US 4,811,595		3/14/1989	Marciniak et al.
<i>[initials]</i>		US 4,770,038		9/13/1988	Zuckerwar et al.
<i>[initials]</i>		US 5,353,631		10/11/1994	Woringer et al.
<i>[initials]</i>		US 5,949,447		9/7/1999	Arai et al.
<i>[initials]</i>		US 5,774,136		6/30/1998	Barbehenn et al.
<i>[initials]</i>		US 5,712,667		1/27/1998	Sato
<i>[initials]</i>		US 6,164,744		12/26/2000	Froger et al.
<i>[initials]</i>		US 3,832,900		9/3/1974	Ross
<i>[initials]</i>		US 3,703,693		11/21/1972	Levinn
<i>[initials]</i>		US 4,403,227		9/6/1983	Bertschy et al.
<i>[initials]</i>		US 6,007,190		12/28/1999	Murray et al.
<i>[initials]</i>		US 6,312,106		11/6/2001	Walker
<i>[initials]</i>		US 6,312,115		11/6/2001	Hara et al.
<i>[initials]</i>		US 6,390,590		5/21/2002	Hansburg
<i>[initials]</i>		US 5,463,377		10/31/1995	Kronberg
<i>[initials]</i>		US 5,788,819		8/4/1998	Onishi et al.
<i>[initials]</i>		US 5,975,102		11/2/1999	Schalk
<i>[initials]</i>		US 6,044,694		4/4/2000	Anderson et al.
<i>[initials]</i>		US 6,312,074		11/6/2001	Walker
<i>[initials]</i>		US 5,737,963		4/14/1998	Eckert et al.
<i>[initials]</i>		US 5,747,689		5/5/1998	Hampo et al.
<i>[initials]</i>		US 5,788,388		8/4/1998	Cowger et al.
<i>[initials]</i>		US 4,984,457		1/15/1991	Morris
<i>[initials]</i>		US 5,315,317		5/24/1994	Terasawa et al.
<i>[initials]</i>		US 5,689,288		11/18/1997	Wimmer et al.
<i>[initials]</i>		US 5,697,248		12/16/1997	Brown
<i>[initials]</i>		US 3,889,247		6/10/1975	Voll
<i>[initials]</i>		US 5,586,085		12/17/1996	Lichte
<i>[initials]</i>		US 4,984,449		1/15/1991	Caldwell et al.
<i>[initials]</i>		US 5,793,705		8/11/1998	Gazis et al.
<i>[initials]</i>		US 4,008,612		2/22/1977	Nagaoka et al.
<i>[initials]</i>		US 4,107,994		8/22/1978	Sogo
<i>[initials]</i>		US 4,419,677		12/6/1983	Kasugayama et al.
<i>[initials]</i>		US 4,796,782		1/10/1989	Wales et al.

Examiner Signature	<i>Andre R. Jackson</i>	Date Considered	<i>05/14/04</i>
--------------------	-------------------------	-----------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

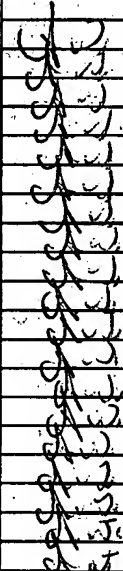
<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	Unknown
				Confirmation Number	Unknown
				Filing Date	September 16, 2003
				First Named Inventor	Minoru USUI, et al.
				Art Unit	Unknown
Examiner Name	Unknown				
Sheet	4	of	5	Attorney Docket Number	Q77369

### U.S. PATENT DOCUMENTS

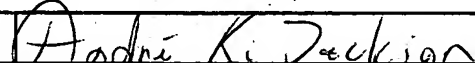
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		WO ✓	98/31548		7/23/1998	Hewlett-Packard Company	
		JP ✓	63247047		10/13/1988	Canon Inc.	Abstract
		GB ✓	2 304 898		3/26/1997	The Whitaker Corporation	
		WO ✓	98/09139		3/5/1998	The General Electric Company	
		EP ✓	0 873 873		10/28/1998	Hewlett-Packard Company	
		JP ✓	06297726		10/25/1994	Canon Inc.	Abstract
		JP ✓	6295225		5/1/1987	Canon Inc.	Abstract
		EP ✓	0 676 624		10/11/1995	Simmonds Precision Products Inc.	
		EP ✓	0 803 364		10/29/1997	Canon Inc.	
		EP ✓	1 088 668		4/4/2001	Hewlett-Packard Company	
		JP ✓	10026549		1/27/1998	Nohken	Abstract
		JP ✓	07137276		5/30/1995	Canon Inc.	Abstract
		EP ✓	0 853 236		7/15/1998	Smiths Industries Public Limited Co.	
		JP ✓	04135862		5/11/1992	Seikosha Co. Ltd.	Abstract
		JP ✓	10-305590		11/17/1998	Matsushita Electric Co., Ltd.	Abstract
		WO ✓	99/42293		8/26/1999	Minnesota Mining & Manufacturing Co.	
		EP ✓	0 660 092		6/28/1995	Canon Inc.	
		EP ✓	0 553 535		8/4/1993	Seiko Epson Corporation	
	JP ✓	2000318183		11/21/2000	Sony Corporation	Abstract	

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		US 2002/0105555, published 8/8/2002 to Tsukada et al.	

Examiner Signature		Date Considered	05/14/04
--------------------	---	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application Number	Unknown
				Confirmation Number	Unknown
				Filing Date	September 16, 2003
				First Named Inventor	Minoru USUI, et al.
				Art Unit	Unknown
Examiner Name	Unknown				
Attorney Docket Number	Q77369				
Sheet	5	of	5		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
AJ		US 5,410,518		4/25/1995	Birkett
AJ		US 4,594,891		6/17/1986	Benz et al.
AJ		US 6,302,527		10/16/2001	Walker
AJ		US 6,050,669		4/18/2000	Yano et al.
AJ		US 6,012,793		1/11/2000	Haigo
AJ		US 5,877,997		3/2/1999	Fell
AJ		US 4,853,718		8/1/1989	El Hatem et al.
AJ		US 5,035,140		7/30/1991	Daniels et al.
AJ		US 5,583,544		12/10/1996	Stamer et al.
AJ		US 5,619,238		4/8/1997	Higuma et al.
AJ		US 5,675,367		10/7/1997	Scheffelin et al.
AJ		US 3,220,258		11/30/1965	Rod
AJ		US 4,636,814		1/13/1987	Terasawa
AJ		US 5,473,353		12/5/1995	Soucemarianadin et al.

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>

Examiner Signature	Andre K. Jackson	Date Considered	05/14/04
--------------------	------------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.